

INFORMATION PAPER

DASG-PPM-NC
29 March 2006

SUBJECT: Leishmaniasis and Other Parasitic Diseases among OIF/OEF Soldiers

1. Purpose. To provide information about leishmaniasis and other parasitic diseases among US Soldiers deployed to OIF/OEF.

2. Facts.

a. Leishmaniasis is a parasitic infectious disease transmitted by the bite of an infected sandfly found throughout tropical areas worldwide, including Southwest Asia. There are multiple species of the parasite in Asia, causing a skin infection (cutaneous leishmaniasis-CL) or an infection of the liver, spleen and other internal organs (visceral leishmaniasis-VL). Worldwide, there are over 2 million new cases of leishmaniasis each year.

(1) Since Jan 03, a total of 853 Soldiers have been diagnosed with CL and five with VL. Most of these infections were acquired in Iraq. Two VL cases were exposed in Iraq; the other three with VL acquired their infections in Afghanistan.

(2) Sandflies that transmit leishmaniasis in Southwest Asia are active from March through November. CL is so well known in the local population, that it's called "Baghdad Boil". Although it is not possible to prevent all sandfly bites, Soldiers can do much to protect themselves by limiting opportunities that sandflies have to bite exposed skin. Sandflies bite at any time, but they prefer to bite at night.

(3) CL typically presents as one or more open skin sores that develop over weeks to months after a bite by an infected sandfly. While CL is not life threatening, the skin sores may result in permanent scarring. Visceral leishmaniasis (VL) is a more serious, potentially fatal, internal form of the disease, infecting the liver, spleen and bone marrow. VL can occur ten days to several years after the bite of an infected sandfly.

(4) As CL is a self-limited infection, small (less than 2 cm) and sparse (5 –10) lesions usually do not require any treatment. However, small lesions may be treated with liquid nitrogen. Another treatment used to treat CL is an FDA-approved device (ThermoMed™) that provides controlled localized current field radio frequency heat directly to the skin lesion.

(5) Lesions which are large, numerous or which may leave a significant scar are considered for treatment with Pentostam®, an intravenous medication. It is administered under an FDA-approved Investigational New Drug (IND) protocol available in DoD only at Walter Reed and Brooke Army Medical Centers. Depending on severity, treatment lasts ten to twenty days. Although this treatment is very effective, it is not a benign drug and significant side effects may include muscle and joint pain and

pancreatic inflammation, all of which resolve after treatment is stopped.

(6) Patients diagnosed with VL are treated with an appropriate FDA-approved anti-leishmanial drug, such as liposomal amphotericin B.

(7) Although no cases of transfusion-acquired leishmaniasis have been reported in the US, all US personnel deployed to Southwest Asia are deferred from donating blood for 12 months after redeployment. Individuals diagnosed with leishmaniasis incur a lifetime prohibition on donating blood.

(8) Since there are no vaccines or medications effective for prevention of leishmaniasis, troop commanders must emphasize the use of personal protective measures. Preventing leishmaniasis depends on preventing sandfly bites. Individual protective measures include the use of repellent lotion containing DEET, wear of Permethrin-treated uniforms, and use of Permethrin-treated bed nets or screened sleeping enclosures. Area vector control compliments these measures.

b. Other parasitic diseases occur in Asia but have not been as commonly reported as leishmaniasis in Army personnel. As with leishmaniasis, none of these diseases are easily transmissible from person to person.

(1) Malaria is spread by mosquitoes. Symptoms include fever, flu-like illness, diarrhea, chills, headache, muscle aches, fatigue, and falciparum malaria can be fatal if left untreated. Prevention of mosquito bites is the mainstay of malaria defense. Although there have been some Soldiers who acquired malaria while in Korea or Africa and were later diagnosed while they were in Iraq, no Soldiers have been infected with malaria due to exposure in Iraq. Because the risk of acquiring malaria in Iraq is minimal, chemoprophylaxis is no longer recommended there. In Afghanistan, doxycycline is used as the first line choice for malarial chemoprophylaxis.

(2) Intestinal parasite infestations are uncommon in Soldiers because of strict emphasis on safe food and water. A stool exam is used to make a diagnosis and most are easily treatable. Some parasites can enter the body through the skin, mouth, or nose when there is contact with water or soil. Schistosomiasis and other microscopic "worms" usually cause symptoms after several weeks' incubation. Such infestations cause a variety of symptoms including rash, itching, fever, cough, muscle aches, and urinary or intestinal problems. Giardiasis is a protozoan infection of the intestine transmitted through contaminated water; it can cause diarrhea, abdominal cramps, bloating, and weight loss.

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